

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## PCT

To:

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Opbergen:

WRITTEN OPINION  
(PCT Rule 66)

Date of mailing  
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Applicant's or agent's file reference

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International Patent Classification (IPC) or both national classification and IPC

H02H3/12

Applicant

SPAARSTEKKER B.V. et al.

1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby **invited to reply** to this opinion.

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also:** For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.  
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 26.11.2004

Name and mailing address of the international preliminary examining authority:



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## I. Basis of the opinion

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

## Description, Pages

1-26 as originally filed

## Claims, Numbers

1-33 as originally filed

## Drawings, Sheets

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

6. Additional observations, if necessary:

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims	1,18, 19, 31-33
Inventive step (IS)	Claims	2-17, 20-30
Industrial applicability (IA)	Claims	

**2. Citations and explanations**

**see separate sheet**

1. Independent **apparatus** claim 1 relates to a switching unit for switching a connection between a mains and a load.

Claim 18 relates to an electrical appliance comprising a switching unit according to one of claims 1-17 and thus represents a further dependent claim of the "product category".

Independent claim 19 relates to a **method** for switching a connection between a load and a mains and thus represents a "process claim".

Claims 31-33 refer to the **use** of the switching unit according to one of apparatus claims 1-17. Use of an entity, however, constitutes an activity or a process or a method which cannot be defined by the features of the apparatus used. Thus, the protection sought by claims 31-33 is not clearly defined. Claims 31-33 should thus be deleted.

2. The prior art cited in the search report and on page 2 of the application does not disclose nor render obvious the subject-matter defined by claims 1-30.
3. However, the wording of claim 1 is so broad and general that it can also be read onto a **switched mode power supply** (SMPS). Hence, independent claims 1, 18, 19, 30-32 do not fulfil the requirement of novelty for the following reason:

Particularly, a step-down or buck-converter can be driven in a **discontinuous current control mode**, i.e. dependent on the current consumption by the load, whereby the current passes from the mains via a switching element and a coil to the load. The output voltage and the load current are measured to determine the switch on/off-times of the switching transistor which is equivalent to bringing **or** holding the switching element into **or** in the open **or** closed state based on said criterion. The criterion mentioned in features c) - e) for determining the correct state is not defined.

Such SMPS also serves the purpose of reducing the overall energy consumption of an electrical consumer as stated in the application on page 2, lines 35/36.

It appears that the subject-matters of dependent claims 2-17 and 20-33 are defined so broadly that the features of said step-down converter are also included.

4. The applicant is requested to restrict, if possible, the claims such that the switching unit according to the invention is novel and implies an inventive step with regard to the available prior art.

If the applicant intends to file amended claims in order to overcome the above objections, he is further requested to clearly identify any amendment, no matter whether it concerns an amendment by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based (see also Rule 66.8(a) PCT and Guidelines, Chap. VI-7.2). This would facilitate the examination of the conformity of amendments with the requirements of Article 34(2)(b) PCT.

In that case, the description should also be brought in line with the amended claims as required by Rule 5.1(a)(iii) PCT.

If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.